

AMENDMENTS TO THE CLAIMS

Claims 1-49 (Canceled)

50. (Currently Amended) An in-shell egg pasteurization system, comprising a spiral oven configured to increase a temperature of an in-shell egg to a first predetermined temperature ~~in a range of between 120°F and 140°F~~ for a predetermined time interval.

51. (Original) The system according to claim 50, further comprising a cooler arranged downstream of the oven and configured to reduce the temperature of the in-shell egg to a second predetermined temperature in a range of between 45°F and 75°F.

52. (Original) The system according to claim 50, wherein the predetermined time interval is between 10 minutes and 120 minutes.

53. (Original) The system according to claim 50, wherein the oven includes a heating medium.

54. (Original) The system according to claim 53, wherein the heating medium includes at least one of hot air and steam.

55. (Original) The system according to claim 51, wherein the cooler is configured to cool the in-shell egg for a time interval in a range of between 1 minute and 20 minutes.

56. (Currently Amended) An in-shell egg pasteurization system, comprising:
~~an oven a cavity~~ configured to increase a temperature of an in-shell egg ~~in a non-batch manner to a first predetermined an elevated temperature in a range of between 120°F and 140°F~~ for a ~~predetermined~~ time interval;
a packer configured to pack the in-shell egg; and
the egg entering the cavity prior to the packer.
~~a grader configured to grade the in-shell egg;~~
~~wherein the oven is arranged between the packer and the grader.~~

Claims 57-85 (Canceled)

86. (Previously Presented) The system according to claim 50, further comprising a spiral cooler arranged downstream of the oven and configured to reduce the temperature of the in-shell egg to a second predetermined temperature in a range of between 45°F and 75°F.

87. (Previously Presented) The system according to claim 50, wherein the predetermined time interval is between 10 and 90 minutes.

88. (Currently Amended) The system according to claim 56, further comprising a cooler arranged downstream of the ~~oven~~ temperature increasing cavity and configured to reduce the temperature of the in-shell egg to a ~~second predetermined further~~ temperature in a range of between 45°F and 75°F.

89. (Currently Amended) The system according to claim 56, wherein the ~~predetermined~~ time interval is between 10 minutes and 120 minutes.

90. (Currently Amended) The system according to claim 56, wherein the ~~even~~ temperature increasing cavity includes a heating medium.

91. (Previously Presented) The system according to claim 90, wherein the heating medium includes at least one of hot air and steam.

92. (Previously Presented) The system according to claim 88, wherein the cooler is configured to cool the in-shell egg for a time interval in a range of between 1 minute and 20 minutes.

93. (Currently Amended) The system according to claim 56, further comprising a spiral cooler arranged downstream of the ~~even~~ temperature increasing cavity and configured to reduce the temperature of the in-shell egg to a ~~second~~ predetermined further temperature in a range of between 45°F and 75°F.

94. (Currently Amended) The system according to claim 56, wherein the ~~predetermined~~ time interval is between 10 and 90 minutes.

95. (Currently Amended) The system according to claim 56, wherein the ~~even~~ temperature increasing cavity includes a spiral oven.

96. (Currently Amended) The system according to claim 56, wherein the ~~even~~ temperature increasing cavity includes a microwave oven.

97. (Currently Amended) The system according to claim 56, further comprising, arranged at least one of (a) upstream and (b) downstream of the ~~even~~ temperature increasing cavity, at least one of (a) an orientor configured to orient the in-shell egg, (b) an egg washer configured to wash the in-shell egg, (c) a dirt detection and removal device configured to detect dirt on a surface of the in-shell egg and remove the in-shell egg in accordance with the detection of dirt on the surface of the in-shell egg, (d) a blood detection and removal device configured to detect blood inside the in-shell egg and to remove the in-shell egg in accordance with the detection of blood inside the in-shell egg, (e) a crack detection and removal device configured to detect a crack in the in-shell egg and to remove the in-shell egg in accordance with the detection of a crack in the in-shell egg, (f) a preheater configured to preheat the in-shell egg, (g) a sizer configured to determine a size of the in-shell egg, (h) a dryer configured to dry the in-shell egg and (i) a cooler configured to cool the in-shell egg.

Claims 98 and 99 (Canceled)

100. (Currently Amended) A method for pasteurizing an in-shell egg, comprising: performing a grading operation on the in-shell egg;

after the grading operation, transporting the egg in a continuously conveyed fashion within an oven, increasing a temperature of the in-shell egg to a first predetermined temperature ~~in a range of between 120°F and 140°F~~ for a predetermined time interval; and packing the in-shell egg in a packer after the temperature increasing step.

101. (New) The system according to claim 50, further comprising said first predetermined temperature being in a range of between 120°F and 140°F.

102. (New) The system according to claim 56, further comprising said first predetermined temperature being in a range of between 120°F and 140°F.

103. (New) The method as described in claim 100, further comprising the step of increasing the first predetermined temperature in a range of between 120°F and 140°F.

104. (New) The system according to claim 50, wherein the oven further comprises a microwave generating oven.

105. (New) The system according to claim 56, further comprising a grader configured to grade the in-shell egg.

106. (New) The system according to claim 105, further comprising said grader transporting the in-shell egg to said packer.

107. (New) An in-shell egg pasteurization system, comprising:

a cavity configured to increase a temperature of an in-shell egg in a continuously conveyed manner to an elevated temperature for a time interval;
an in-line and continuous grader configured to grade the in-shell egg; and
the cavity succeeds the grader.

108. (New) The system according to claim 107, further comprising a packer configured to pack the in-shell egg.

109. (New) The system according to claim 108, further comprising said grader transporting the in-shell egg to said packer.